IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

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| In re Application of: | ) |
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| Xavier BLIN et al. | ) Group Art Unit: 1611 |
| | ) |
| Application No.: 10/529,266 | ) Examiner: Kevin S. ORWIG |
| | ) |
| §371 (c) Date: October 3, 2005 | ) Confirmation No.: 4160 |
| | ) |
| For:    GLOSSY NON-TRANSFER | ) |
|         COMPOSITION COMPRISING A | ) |
|         SEQUENCED POLYMER | ) |

Commissioner for Patents                              **VIA EFS WEB**
P.O. Box 1450
Alexandria, VA 22313-1450

Sir:

### PRE-APPEAL BRIEF REQUEST FOR REVIEW

Further to the Notice of Appeal filed concurrently herewith, Applicants request review, before the filing of an Appeal Brief, of the Final Office Action dated June 29, 2009, in the above-referenced application. No amendments are being filed with this request. Review is requested for the reasons stated in the five-page attachment to this paper, entitled "Arguments for Consideration." The undersigned is an agent of record.

Respectfully submitted,

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Dated: November 25, 2009            By: _____
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## ARGUMENTS FOR CONSIDERATION

Claims 77-80, 83-94, 97-107 and 109-161 are pending in this application[1] and stand rejected in the Final Office Action dated June 29, 2009.

**I.** **The Rejection under § 103 (a) Should Be Withdrawn**

The Office maintained the rejection of claims 77-80, 83-94, 97-107, and 109-161 under 35 U.S.C. § 103(a) as being unpatentable over U.S. Patent No. 6,153,206 to Anton et al. ("Anton") in view of U.S. Patent No. 6,663,855 to Frechet et al. ("Frechet") and U.S. Patent No. 6,531,535 to Melchiors et al. ("Melchiors"). Advisory Action, at page 2. Applicants respectfully traverse the rejection.

Anton generally describes a polymer comprising a first repeat unit (first monomer) and a second repeat unit (second monomer). Anton proposes in the table at col. 4 that these repeat units can be arranged in various ways, including block copolymers and block terpolymers. In that table, Anton also distinguishes those block polymers from graft copolymers and random polymers.

The Office has highlighted one of the graft copolymers in the table at col. 4, namely, IIIIIIIIIBBBBBBBBBB, in rejecting the present claims. Applicants believe that such a graft copolymer does not teach or fairly suggest the present claims for at least the following reasons.

- First, the present claims recite the use of "block polymers" and not graft copolymers.

- Second, in addition to a first block and a second block, the present claims recite the presence of an intermediate block. The Office asserts that "the segment IIBB that connects the IIIII and BBBBB blocks" is such an intermediate block. Advisory Action at page 2. However, even assuming that Anton's graft copolymer IIIIIIIIIIBBBBBBBBBB can be construed as a block copolymer, such a block copolymer is a "diblock" by definition as one of ordinary skill is well aware. Thus, there is no intermediate block.

- Third, the present claims recite that the intermediate block is a random copolymer. Again, assuming *arguendo* that the graft copolymer should be construed as a

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[1]     See claim set presented with the Response filed September 25, 2009.

block copolymer and further assuming that "IIBB" constitutes an intermediate block, Anton still does not teach or suggest the claimed inventions at least because IIBB is not a random block. Webster's II New College Dictionary defines "random" as "having no specific pattern, purpose, organization or structure". Random block means that in a polymer chain monomers (for example, I and B) may follow in any order. *See* "Random polymer" at line 60, in the table of col. 4, Anton. It is thus clear to one skilled artisan that "IIBB" is not random because there is a recognizable pattern in this block: one end comprises one kind of monomer, the other end comprises another kind of monomer.

- Fourth, the present claims recite certain glass transition temperature (Tg) for each of the blocks. That is, the first and second blocks have different Tgs and the intermediate block has a Tg that is between the first and second blocks. Anton provides a broad description of the Tg for the first repeat unit and the second repeat unit, i.e., that the first repeat unit is chosen from the group consisting of methacrylate ester monomers which, if polymerized, would yield a polymer having a glass transition temperature of -10 to 75°C; and the second repeat unit is chosen from the group consisting of methacrylate ester monomers which, if polymerized, would yield a polymer having a glass transition temperature in the range of about 76 to 120°C. *See* Abstract. Anton also describes certain block polymers in the table at col. 4. Each of those specific block polymers comprises blocks having a Tg over 40 °C. Accordingly, neither the general discussion or the specific examples in Anton teaches or fairly suggests the Tg ranges recited in the pending claims or that an intermediate block should have a Tg between the other blocks.

- Finally, the pending claims also recite that the block polymer have a polydispersity index greater than or equal to 2.5. And as noted by the Office, Anton is silent as to the polydispersity index.

Recognizing the deficiencies of Anton, the Office relies on Frechet and/or Melchiors. Frechet generally describes triblock ABA copolymers. In such triblock copolymers, Frechet

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further indicates that the "Tg of the flanking polymers will be higher than that of the core polymer", *see* col. 4, lines 35-36. However, such a triblock copolymer is readily distinguishable from the pending claims.

- The pending claims recite that the first block and the second block are chosen from categories of blocks having different Tgs. In contrast, in Frechet's triblock ABA copolymer, if B is viewed as the intermediate block, the "first" and "second" blocks are the same and thus, would have the same Tg, which goes against the explicit language of the pending claims. Furthermore, in triblock ABA copolymers, the intermediate block B has a Tg of less than that of the two blocks( A) linked together by B, which again goes against the language of the pending claims, which recite that the Tg of the intermediate block ranges from the Tg of the first block to the Tg of the second block.

- Frechet also describes block polymers having an architecture such as A-R-B-A or A-R-B-R-A, wherein R is a random block of monomers A and B or B and C or more monomers. These block polymers arguably have a random intermediate block, R. However, Frechet is silent on the Tg of R. Furthermore, Frechet is silent as to polydispersity of the block polymer.

Applicants thus maintain that Frechet has deficiencies similar to that of Anton. That is, neither of these two references teaches or suggests the claimed random block and polydispersity index. To be sure, the Office argues that "Applicants have provided absolutely no evidence to support their assertion that the Tg of the intermediate segment taught by Frechet (or Anton) could not have a Tg as instantly claimed . . . ." Applicants respectfully submit that the Office, not Applicants, bears the initial burden of factually supporting any *prima facie* conclusion of obviousness. It is the Office's burden to establish with evidence that references, alone or combined, teach the claims. Furthermore, the test for obviousness is not whether the reference **could** have claimed elements, it is whether the reference when viewed as a whole would lead a skilled artisan to arrive at the claimed inventions.

Finally, we turn to Melchiors. The Office cites this reference for its description of a copolymer P for the use in coating composition, wherein the ratio Mw/Mn (e.g. polydispersity

index) varies from 2.5 to 4.0, and preferably from 3.0 to 4.0. *See* lines 5-7, col. 6. Again, this
reference does not cure the deficiencies of Anton and/or Frechet.

- As an initial matter, copolymer P is a **mixture** of copolymers differing from each
  other by comprising **different** set of monomers, *see* lines 15-22, col. 6, as
  opposed to a block polymer comprising same set of monomers as currently
  claimed.
- Furthermore, Melchiors does not teach or suggest the claimed random
  intermediate block.
- While Melchiors describes a polydispersity index from 2.5 to 4.0, that description
  is within the context of the copolymer P, which again is not a copolymer as
  currently claimed. Thus, Melchiors does not motivate a skilled artisan to
  incorporate a property of polydispersity index of greater than 2.5 into a block
  polymer.
- Melchiors does not discuss or appreciate the effect of polydispersity on the
  properties of the polymer. Instead, as indicated in the response filed September
  25, 2009, examples 13 and 14 in Table 2, each with the polydispersity index of
  3.2 thus within the range of the one as disclosed by Melchiors, display, for
  example, either significantly lower solvent resistance, or unsuitable for storage,
  when compared with Melchiors' polymers. This result indicates that the desired
  property is not due to polydispersity index. Thus, Melchiors provides no reason
  as to why a skilled artisan would arrive at a block polymer with the polydispersity
  index as claimed.

As such, being silent on the random block, Melchiors does not cure Anton and Frechet's
deficiency. And when viewed as a whole, Melchiors provides a skilled artisan no reason to
apply the claimed polydispersity index range into a block polymer.

Again, the Office argues that "Applicants have not established that these differences are
due to the polydispersity of the resultant polymers". Applicants respectfully reiterate that to
establish a *prima facie* obviousness, it is the Office's burden to go forward with evidence that

polydispersity index of greater than 2.5 contributes to the desired property, which Melchiors does not teach as indicated by Examples 13 and 14 in Table 2.

The Office further argues that "all that is required to meet the claimed language is a recognition in the art that polydispersity values greater than 2.5 have been useful in similar applications." Applicants again respectfully disagree. Under the Office's rationale, if a phenyl ring has been shown to be useful in one drug application, all other compounds containing a phenyl ring would then be obvious in similar drug application, which is incorrect according to the U.S. patent practice. As discussed previously, the test for obviousness is not whether the reference describes a claimed element, it is whether the reference when viewed as a whole would lead a skilled artisan to arrive at the claimed inventions.

For the foregoing reasons, Anton, Frechet, and Melchiors, either alone or in combination, do not render obvious the current claims. Applicants respectfully request the rejection be withdrawn.

## II.    Conclusion

In view of the foregoing remarks, Applicants respectfully request reconsideration of this application and the timely allowance of the pending claims.

If there is any fee due in connection with the filing of this paper, please charge the fee to our Deposit Account No. 06-0916.